CHAPTER 2. CONDUCT SPOT INSPECTION OF OPERATOR'S AIRCRAFT

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance:

- Spot Inspection: 3628
- Structural Spot Inspection: 3647

B. Avionics:

- Spot Inspection: 5628
- Structural Spot Inspection: 5647

3. OBJECTIVE. This chapter provides guidance for observing and analyzing in-progress maintenance operations for compliance with specific methods, techniques, and practices in the operator's inspection and maintenance program.

5. GENERAL.

A. Definition: Work package - Job task control units developed by the operator for performing maintenance/inspections. A typical work package may include the following:

- Component change sheets
- Inspection work cards
- Nonroutine work cards
- Appropriate sections of the maintenance procedures manual
- Engineering Orders (EOs)

B. FAA Inspection Personnel. It is important that Airworthiness Aviation Safety Inspectors (ASIs) are familiar with the type of aircraft to be inspected before performing the inspection. This can be accomplished through on-the-job training.

C. Coordination Requirements.

(1) Airworthiness ASIs possess various degrees and types of expertise and experience. An ASI who needs additional information or guidance should coordinate with personnel experienced in that particular specialty.

(2) Geographic units need to establish close coordination with the Certificate Holding District Office (CHDO). Coordination is required to:

- Gain access to FAA office operator file information not available to the geographic unit
- Transmit all inspection results and/or recommendations to the CHDO
- Receive any changes implemented by the CHDO as a result of the geographic units recommendations

7. INITIATION AND PLANNING.

A. Initiation. Spot inspections can be scheduled as part of the work program, but may be initiated whenever a problem is noted, including deficiencies noted during other types of inspections.

B. Planning.

(1) Spot inspections derived from the planned work program.

(a) The number of spot inspections in the work program depends on the type and number of operator aircraft. After determining the type of aircraft to be inspected, confirm the aircraft availability and scheduled maintenance functions with operator personnel.

(b) If the maintenance to be observed is known, review the operator's maintenance procedures manual to become more familiar with the maintenance task. Review the following:

- Required Inspection Items (RII), if applicable
- Forms used to document maintenance task
- Latest manual revision and date
- Special tools and equipment used to perform the maintenance task

- Any other manual requirements relating to the maintenance task

(c) For geographic units in which the maintenance procedures manuals are not in the office, review the applicable sections of the operator's maintenance manual at the facility prior to performing this task.

(d) Examining previous inspection findings provides the ASI with background information regarding problem areas found during other spot inspections. This information can give an indication of how effective past corrective actions were in resolving previously identified problem areas.

(e) The FAA provides information such as Airworthiness Directives (AD), Service Difficulty Report (SDR) Summaries, Maintenance Bulletins, and PTRS entries. This information should be reviewed, when available, so as to become familiar with current service difficulty information. While performing the spot inspection, ensure that any conditions described in this information do not exist on the aircraft.

(2) Spot inspections not derived from the planned work program. There are many situations while performing other surveillance activities that afford the opportunity to perform spot inspections. For example, if a discrepancy is found during a ramp inspection that requires maintenance, a spot inspection of that maintenance function could be performed.

9. MAINTENANCE RECORDS. During performance of the spot inspection, special attention should be paid to the following areas, as applicable:

- AD's current status, including the method of compliance
- Overhaul records, including documentation containing the overhaul details and replacement time
- Major repair/alteration classifications and the use of approved data
- Replacement time of life-limited parts

11. PERFORMING THE SPOT INSPECTION

A. Selecting a Maintenance Task.

(1) Discuss with the maintenance supervisor what maintenance is currently being performed to determine what portions of that current maintenance/inspection should be observed.

(2) Special emphasis should be placed on observing maintenance tasks that involve RII items. Problem areas to look at include:

- Persons performing inspections outside of authorizations or limitations
- RII items not being properly identified or accomplished

B. Performance Standards

(1) Each operator has a maintenance/inspection program for its individual maintenance operations. For maintenance to be performed on the operator's aircraft, there must be corresponding provisions and procedures in the operator's maintenance manual.

(2) Each operator should have special procedures in the manual that ensures persons outside of the organization perform maintenance in accordance with the operator's maintenance manual.

C. Discrepancies Noted During Surveillance. When deviations from accepted procedures are noted, it must be brought to the attention of maintenance management that corrective action must be taken immediately. Discrepancies noted during the inspection may require follow-up at a later time.

13. STRUCTURAL SPOT INSPECTIONS.

A. In response to recent events, the FAA has determined the need for increased suveillance of transport category aircraft undergoing "C," "D," or similar "heavy inspections." This increased surveillance is due to the "aging" fleets of U.S. certificated operators and reflects concern over structural fatigue and corrosion.

B. During the observance of a "heavy inspection," ASI's must pick an inspection area where maintenance has been started and where there could be possible fatigue or corrosion problems (especially an area that is not usually open to inspection, such as under the galley or lavatories).

(1) If inspecting an area where maintenance is in-progress, the following should be evaluated:

(a) While performing their job functions, are personnel accomplishing their job task per the work package

(b) Does the Aging Aircraft/Corrosion Control program provide the necessary guidance to evaluate and respond in a timely manner to structural fatigue and corrosion

(2) If inspecting an area where maintenance has already been accomplished, the following should be evaluated:

(a) Are there any structural fatigue or corrosion problems evident

(b) If there are, were they identified by the person(s) responsible for that area

(c) If they were identified, was the corrective action initiated and completed

(3) Is there an AD applicable to this problem? If there is an AD, what is the status of that AD?

NOTE: While inspecting these areas that are not normally accessible, look for evidence of structural major repairs. If a major repair was accomplished, review the approved data for that repair.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of FAR Parts 121, 125, and 135, as applicable
- Successful completion of the Airworthiness Inspectors Indoctrination Course or previous equivalent
- Previous experience working with an operator with similar types of aircraft

B. Coordination:

- This task may require coordination between Avionics and Maintenance Aviation Safety Inspectors (ASI)
- Geographic units must coordinate with the CHDO to obtain knowledge of the operator's maintenance procedures and any other items of concern that may surface during routine inspections

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- FAR Parts 39, 43, and 91
- Order 8310.2, Maintenance-Review Case Handbook, as amended
- Order 8340.1, Maintenance Bulletins, as amended
- Operator's Maintenance Procedures Manual and inspection work packages

B. Forms. None.

C. Job Aids. None.

5. PROCEDURES.

A. Initiate Spot Inspection, as Applicable.

B. Select Appropriate Aircraft For Inspection. Determine the following from the operator's maintenance schedules:

- Aircraft availability
- Aircraft type
- Type of maintenance being performed

C. Prepare for the Inspection. Review the following:

(1) Maintenance manual procedures for maintenance being performed (if available)

(2) Operations specifications time limitations, when applicable to the maintenance task

(3) Previous inspection findings

(4) Applicable maintenance alert bulletins

(5) Service Difficulty Report (SDR) Summary

(6) Any new regulation and/or AD requirements affecting the aircraft to be inspected

D. Perform the Spot Inspection.

(1) Identify yourself to the maintenance supervisor and discuss the nature of your inspection.

(2) Discuss with the maintenance supervisor/person in charge the status of the selected maintenance task.

(3) Select a particular maintenance task within the work package. If possible, include a maintenance task that has been designated by the operator as a Required Inspection Item (RII).

(a) Ensure that current maintenance procedures are available to the person(s) performing the work by accomplishing the following:

- Asking maintenance personnel for the maintenance procedures used to accomplish the work
- Recording the date of the maintenance procedures being used to perform the maintenance task for future comparison with the maintenance manual master copy

(b) Ensure that the maintenance is performed according to established procedures by comparing actual performance to the operator's approved maintenance/inspection manual procedures.

(c) Ensure that the proper tools are being used by accomplishing the following:

- Observing that special tools referenced in the maintenance manual are being used
- Checking calibration due dates on precision tools, measuring devices, and testing equipment requiring calibration

(d) Ensure that the operator has the facilities to properly perform the maintenance task.

(e) Ensure that systems being maintained are not exposed to environmental conditions that could contaminate or damage components.

(f) Ensure that maintenance recording is accomplished according to the operator's recordkeeping system.

(g) Note any maintenance task deficiencies and include any copies of the documents that revealed the deficiencies.

(h) For those maintenance tasks involving RII functions, determine that the persons observed performing these functions are appropriately certificated, authorized, and qualified.

E. Analyze the Findings. Evaluate inspection findings to determine if discrepancies exist. Discuss the results with the operator.

7. TASK OUTCOMES

A. File PTRS Data Sheet. When closing out a structural spot inspection, include the following information on the PTRS Data Sheet:

- The age of the aircraft
- If the operator's inspection include "aging aircraft" related activities

NOTE: Additionally, when appropriate, fill in the "National Use" block with the term "Aging" when aircraft are over 15 years old.

- The Ad number, AD type, and inspection results, if an AD structural repair or modification was accomplished.

B. Completion of this task can result in requested manual revisions.

C. Document Task. File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Based on the analysis of inspection findings, plan increased surveillance of problem areas, as applicable.